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Questions open to infinity and the legitimacy of wonder in university curricula

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Abstract

Drawing on the work of prominent atheists and theists, this article argues that any genuinely comprehensive vision of education should include space on the curriculum for subjects such as Theology. Theology is an example of a subject which pushes questioning to infinity, thereby allowing for insight, potential discovery and wonder. The article identifies problems in education systems framed by narrow learning outcomes. These unduly limit the scope for legitimate enquiry and restrict the reach of education. Scholars from a range of disciplines with differing worldviews make a case for a more open educational ambition.

Keywords

Wonder, infinity, curriculum, universities

1. Introduction

Interest in *wonder* and “big questions” is now shared across various disciplinary fields by scholars of widely differing worldviews. It often reflects a desire for “holistic conceptions of learning”, and can rub up against narrowly defined outcome approaches to education (Tam 2014). Wonder – here defined as the *desire* for knowledge or learning, the motive force of questioning, the feeling of some doubt or curiosity -- *opens up* narrowly construed forms of argumentation. Rather than relying on mainly or exclusively propositional accounts of meaning, wonder can also allow for *dialogos*, flow, and metaphoric understandings. It motivates questioning from different angles and perspectives and allows questions to be revised, reviewed, modified, and hopefully improved. The experience of wonder is the beginning of human knowledge, and is therefore prior to knowledge. It is not quite a part of knowledge itself, but that which makes it possible. And it always implies a *lack* of knowledge which we *desire* to obtain. It is an experience of intellectual erotic desire for that which is, at present, unknown. Plato held that wonder was the beginning of philosophy (*Theaetetus* 155d). According to the opening words of Aristotle's *Metaphysics*, it is something natural to human beings: ‘All men by nature desire to know’ (980a).

It is fundamental to wonder that the *desire* for knowledge always implies human engagement with that which we do not know. If learning is *motivated* by an encounter with the unknown, it can hardly be reduced to already known outcomes. The acquisition of knowledge that is already known by someone else is usually called training. Training is never the learning of something new. But wonder is the root of discovery.

Learning outcomes are one feature of the structuring of education, usually advanced from a concern for ‘quality’ which may be robustly maintained by university non-academic departments (guardians of ‘quality and standards’). Many academics opine that learning outcome statements are inadequate to capture those “ineffable” aspects of learning and may result in “reductionism” and “reification” (Ewell, 2008). By their very nature, outcome statements tend to break down holistic conceptions of learning and reduce them to learning abilities or changes in behaviour that are specific, observable and measurable. As a result, outcomes schemes still fall short of being widely accepted and recognised in academia as a valid way of conceptualising what learning is all about. (Ewell, 2008, p. 165). If one only ever learns “outcomes”, one is unlikely to question those outcomes. One is unlikely to relate them to a whole or integrate them into a worldview.

In a similar vein, outcomes-based approaches are criticised for their constrained serendipity which presumes that all of the valued and important ways that a learner can construct meaning in the context of a particular discipline or ability are known in advance (Ewell, 2008). This problem is conceived to be more pronounced in advanced levels of study and in certain disciplines such as fine

arts, where unexpected important learning may occur during the instructional process. (Ewell, 2008 p. 165).

This essay seeks to make a case for the importance of the pursuit of transcendence in education, here conceived as the condition of the possibility of wonder in the lecture hall and classroom. Further, we argue that the traditional “space” given for reflection on transcendence and wonder is to be found at the university level in the work of Theology departments.

2. God: The Open Question

For John Henry Newman in 1852, a university was irreducibly theological. If a university was a place of ‘*teaching universal knowledge*’ (Newman, 1996, p.3), it could not exclude the study of religious truth (p. 25). But more than that, knowledge itself depended on the God of truth. Such a thing as a university was possible only because there was such a thing as universal knowledge (truth), and there was such a thing as universal knowledge because there was One God. Universities, therefore, were an expression of monotheistic faith. The unity of truth reflected the ultimate unity of God. ‘Admit a God, and you introduce among the subjects of your knowledge, a fact encompassing, closing in upon, absorbing, every other fact conceivable’ (p.29). All subjects, all sciences, were to be studied together in one institution because all types of knowledge were held to be implicitly relatable. We might not yet know *how* they relate, but we nevertheless believe, on principle, that they *ought* to. So Newman contended that ‘all knowledge forms one whole, because its subject-matter is one; because the universe in its length and breadth is... intimately knit together [by its Creator]’ (p.45). This allowed Newman to conclude that ‘Religious Truth is not only a portion, but a condition of general knowledge. To blot it out is nothing short... of unravelling the web of University Teaching’ (p.57). Without God, why teach subjects that are otherwise incapable of any ultimate relation one to another in a single institution? Without monotheism, why bother with universities?

So, ‘all branches of knowledge are connected together, because the subject-matter of knowledge is intimately united in itself, as being the acts and work of the Creator’ (p. 76). We encounter here an axiomatic presupposition that monotheism provides the metaphysical basis that makes universal knowledge possible. This same theological basis also makes it easier to say what learning and teaching are for: knowledge is its own end because it is a gift of God. Knowledge is something that has been given us in the generosity of God. The religious basis of the university, therefore, allows education to reciprocate Divine liberality and freedom. A liberal education is one that is characterised by ‘freedom from littleness and prejudice’ (p.101); it is expansive, not merely useful for this or that. It is candid and demands that the properly enlightened conscience leads, fearlessly, where it will – even, in Newman’s own case, to Catholicism.

It might at first seem paradoxical that monotheistic belief frees one from prejudice and allows one to take a non-dogmatic view of education. But that is part of what is implied here. Consider some alternatives to Newman's vision. Are they more or less dogmatic (in the pejorative, rather than Catholic sense)? Are they more or less free from littleness and prejudice? Are they more open to asking problematic questions, or are they, in important aspects, limited by a narrow set of methodological assumptions that close off important areas of reflection? Are they open to wondering about that which we do not know?

3. The Copleston-Russell Debate

For an example of this issue, we would like to turn to the remarkable debate, broadcast on BBC Radio in 1948, between Frederick Copleston, S. J., and Bertrand Russell on the existence of God. The debate has been held to typify the arguments presented by theists and atheists in the latter half of the 20th century (Oppy and Trakakis, 2009.) The discussion focussed on the *question* of the creation of the universe. Can one meaningfully ask and answer the question, 'How come anything rather than nothing?'

At one point in the exchange, Copleston accused Russell of dogmatism. In Copleston's view, Russell had dismissed the intellectual pursuit of questions to which there were no easily obtainable or obvious answers. If Russell were correct, the intellectual act of questioning should be tightly restricted and limited to those areas where one can predict that one can find a ready answer. In contrast, Copleston advocated an ongoing pursuit beyond the immediately answerable. Russell, meanwhile, maintained an analytical demand that did not accept the possibility of meaning that broke the rules of internal coherence. This is the key moment:

Russell: But when is an explanation adequate? Suppose I am about to make a flame with a match. You may say that the adequate explanation of that is that I rub it on the box.

Copleston: Well, for practical purposes – but theoretically, that is only a partial explanation. An adequate explanation must ultimately be a total explanation, to which nothing further can be added.

Russell: Then I can only say that you're looking for something which can't be got and which one ought not to expect to get.

Copleston: To say that one has not found it is one thing; to say that one should not look for it seems to me rather dogmatic.

(From the transcript of the Russell/Copleston radio debate,

http://www.scandalon.co.uk/philosophy/cosmological_radio.htm hosted on Scandalon, Stafford

Grammar School)

The Copleston-Russell debate has had a lasting influence on subsequent Anglophone Catholic thinkers engaging with the analytic philosophy. For Herbert McCabe, O. P., Russell was simply refusing to ask a legitimate question. McCabe contended that this was just ‘arbitrary’ (McCabe, 1987, p.5). Since McCabe argued that the ‘validity of science’ depended on asking questions that ‘venture into the unknown, moving beyond ‘clearly established techniques’ and into the ‘growing point of science’ (p.2), Russell’s refusal to ask the question was a sign of his refusal to be genuinely scientific. He had set prescribed limits on enquiry, ruled out certain sorts of questions on principle. McCabe thought this quite wrong. To McCabe's mind, Wittgenstein was rather more promising than Russell: in the *Tractatus*, there was enough to suggest that the ultimate question was at least *askable* (if unanswerable). ‘It is not *how* things are in the world that is mystical, but *that* it exists’ (Wittgenstein, 1974,1961, *Tractatus* 6.44, p. 73). For Wittgenstein, one could at least *say* that the mystical was unsayable – one could at least say ‘What we cannot speak about we must pass over in silence’ (Wittgenstein, 1974,1961, *Tractatus*, 7, p. 74); Russell was not even prepared to say that. In this sense, at least the early Wittgenstein’s logical world was sufficiently open to acknowledging an unsayable realm beyond its own boundaries; Russell’s was firmly closed.

Denys Turner developed McCabe’s interpretation of the Russell-Copleston debate in his published lecture, "How to Be an Atheist" (2002). Turner focussed on Russell's refusal to accept the possibility of the question, ‘Why is there something at all, rather than nothing at all?’ He defended the business of asking very odd questions, “the sort that you can make sense of asking, but not a lot of the answer” (Turner, 2002, p.19). He characterised these as infantile questions, unlike the adult ones that we have some control over, some degree of disciplined ability to address. “Scientific questions are adult, intelligible questions demanding sensible answers arrived at by explicitly controlled methodologies. Theological questions, on the other hand, are childish.” (ibid). Turner went on to reflect on the childish tendency to ask the question “why?” too often. Turner’s criticism of Russell’s dogmatism lead to his final barbed suggestion for atheists:

"So, 'How to be an atheist? It is not easy: you need to work at it. Be intellectually adult, get an education, get yourself a discipline; resist all temptation to ask such questions as you do not know in principle can be answered, being careful to suppress any which might seem to push through off civilised limits; be reasonable, lest you find yourself being committed to excessive rationality; and have the good manners to scratch no itches which occur in intellectually embarrassing places,—at least in public." (Turner, 2002, p.22)

Turner was not finished, for he went on to propose,

“Then I shall argue with you on behalf of the child, not in the name of God, but in the name of a question which remains about the world, not yet in the name of theology, but in the name, merely, of an intellectual possibility you have excluded, not on account of *how* the world is, which seems a relatively sensible and obvious state of affairs to me, but out of amazement of intellect, and a sort of primal gratitude of spirit, that there is anything at all, rather than nothing, and that there is *anyone* at all, rather than no one, for whom it exists” (ibid)

Turner's criticism ought to be read in the context of the emergence of the so-called 'new atheists'. It has often been noted that the new atheists often seemed to be offering an overly reductive reading of religion, treating it as a primitive sort of science (Gray, 2018, p.11). For some (such as John Gray) this danger was similar to the one Wittgenstein had earlier observed in J G Frazer's *Golden Bough* (Wittgenstein, 2010,1890). The reductive reading of religion was actually a form of savagery: "Frazer is much more savage than most of his savages ... *His* explanations of primitive practices are much cruder than the meaning of these practices themselves" (Wittgenstein, 2010, 1890, p.8)

Disciplines, whatever their nature, are bound by practices and constraints that define them as *disciplined*. That constraint affords them their power as they operate within a narrow space about which they offer degrees of confidence or even likely certainty. Russell's case might be that once a satisfactory answer to a question is found, one should not look any further and that a pursuit that requires you to leave the bounds of discipline is not worth undertaking. We suggest, in agreement with Copleston and Turner, that this is unduly dogmatic and that the curriculum deserves space for the asking of questions and thinking that is infinite in possible reach, even to the extent that this places a pedagogically necessary pressure on the presumed scope of disciplines.

There is space between and beyond disciplines to which the intellect can turn. Disciplines are defined and constrained by limitations. The space between disciplines is demonstrably of value in practical terms when one considers the intellectual leaps that take place when different disciplines come together, which Vervaeke notes is a site of insight (Vervaeke 2013, cf. Vervaeke, Mastropeitro and Misevic 2017). More generally, we would recognise that some questions require the deployment of more than one kind of explanatory power, especially when dealing with human beings. In healthcare, for example, the patient's perception of pain is a vital consideration alongside the results of any tests.

If you really want to set a discussion of the purpose of universities in the widest possible frame, you need also to discuss the beginning of the universe. That, at least, is what McCabe and Turner advise. We may apply this by extension to education more broadly, even in terms of schooling, assuming we consider schooling an appropriate place for pupils to be exposed to some sense of the state of intellectual debate about ultimate matters and concerns, something English Religious Education has historically sought to do.

4. Utilitarian dogma in education

At times, opponents of the traditional theological defence of liberal education have attempted to dismiss it as an expression of the interests of a bourgeois class in possession of sufficient wealth and leisure time to indulge in a liberal education. On this reading, liberal education was one way to obtain a desirable marker of social capital. It is, of course, true that Newman spoke of liberal knowledge as 'a gentleman's knowledge' (p. 83), and it is, of course, true that the Oxford and Cambridge of Newman's day was restricted to members of a class elite. The universities acted as a kind of

‘intellectual finishing school of the gentry and higher professions... [in which] the academic degree... [was] seen by many as the entry gate to the English middle classes’ (Stevens in Lea, 2015, p.76). Academics were the gatekeepers of class membership. A degree was an *exclusive* commodity. But there is considerably more to Newman’s vision than this, and on a deeper level, the criticism fails precisely because it does not understand the underlying *inclusivity* which sustains the theological view of education. In Newman’s theological vision, the principle of the enlargement of knowledge was something ‘beyond it’ (p.95). And when Newman rehearsed the history of education in England, he traced it back to monastic (not aristocratic!) roots. In particular, Newman referred to St Augustine’s Abbey in Canterbury as the earliest recognisable educational institution in England. (In 1855, the Victorian ecclesiastical historian, Arthur Penrhyn Stanley, similarly described St Augustine’s as ‘the mother school, the mother university of England, the seat of letters and study, at a time when Cambridge was a desolate fen, and Oxford a tangled forest in a wide waste of waters’ (Stanley, p.24). For Newman, the ‘work of teaching’ was ‘like a mission’ (Newman, p.24), and the teaching vocation in England was to be traced back to ‘three holy men... of three different nations’ in Canterbury: Saint Benedict Biscop (628-690), St Theodore of Tarsus (602-690), and St Adrian the African (c. 637-710).

The basic motivation for education was not class exclusion; it had originally, in point of historical fact, been religious. Bede recorded that St Adrian the African taught the English science and mathematics as part of his missionary vocation (Bede, 4.1-2, pp. 203-206). We are here approaching something like the position of Fred Clarke (Director of the Institute of Education in the University of London between 1936 and 1945), who in 1923 was still contending that ‘the ultimate reason for teaching Long Division to little Johnny is that he is an immortal soul’ (Clarke, p.2). The point is actually an important one: after all, if one adopts a utilitarian vision of education, it becomes difficult to say why we should offer everyone an education in the first place. Why not simply equip some people with low-grade skills for low-grade jobs? Why demand equality of opportunity in education for all if one lacks the religious vision that all souls are equally loved by God and equally delight in his truth?

Newman was aware that utilitarianism had already led to the quantification of education, i.e., to attempts to reduce intellectual qualities to measurable quantities. Utilitarians, he wrote, ‘insist that Education should be confined to some particular and narrow end, and should issue in some definite work, which can be weighed and measured... [so that it has] real worth in the market’ (p.110). Significantly, the imposition on education of ends that can be weighed and measured in line with already established techniques closes off McCabe’s educational venture into the unknown at the growing point of science. It also means that little provision is made for opportunities to evaluate the worth of the already established techniques, to subject methodologies to rigorous testing, criticism, or revision. The prevalent system of dogma – the one setting the limits to what questions can be asked – goes unchallenged. Or if it *is* challenged, the criticism has little chance of gaining traction.

Consider the contemporary dominance of bureaucratic managerialism in contemporary education. One problem with Max Weber's doctrine of bureaucracy, as Alasdair MacIntyre has argued, is that it is ultimately arbitrary: its self-justification is ultimately subjective and self-referential. In MacIntyre's reading, Weber's basic understanding of values is essentially Nietzschean. The bureaucrat simply asserts the effectiveness of his own management techniques. So MacIntyre writes, 'on Weber's view no type of authority can appeal to rational criteria to vindicate itself except that type of bureaucratic authority which appeals precisely to its own *effectiveness*. And what this appeal reveals is that bureaucratic authority is nothing other than successful power' (MacIntyre, p.26). In part, this power depends on the indoctrination of those being managed. The manager, for example, needs 'to ensure that... subordinates argue from premises which will produce agreement with his own prior conclusions' (p.27). They set the limits on 'the realms in which rational agreement is possible – that is, of course, from their own point of view to the realm of fact, the realm of means, the realm of measurable effectiveness' (p.30). In the contemporary age, MacIntyre observes, truth has been displaced by effectiveness, and this displacement has successfully been extended into 'such spheres as those of education and religion' (31). The problem is that it is impossible to quantify or measure the effectiveness of education intended for the greater glory of God. And this is where the well-managed university finds it difficult to tolerate Newman's vision of a liberal education.

Earlier in this essay, we discussed Turner's criticism of educational outcomes. Recalling his critique, it is telling that the extension of managerialism into education is perhaps most clearly discernible in the setting of learning objectives, though it is also present in audit culture, performance indicators, impact measures, and cultures of compliance. In some cases, theorists of management have come close to acknowledging that they are in competition with Newman's vision. Take, for example, Peter Drucker's implied swipe and Newman's doctrine of knowledge as an end in itself:

[Here] is a symptom of the shift in the meaning of knowledge from an end in itself to a resource, that is, a means to some result. What used to be knowledge is becoming information. What used to be technology is becoming knowledge. Knowledge is the central energy of a modern society exists altogether in application and when it is put to work. Work, however, cannot be defined in terms of disciplines. End results are interdisciplinary. (Drucker, 1969, p.238)

Drucker was instrumental in the shift towards measurable effectiveness in educational practice, an early proponent of the knowledge economy. In *The Age of Discontinuity*, Drucker redefined knowledge as an economic good capable of being traded: 'What matters is that knowledge has become a central "factor of production" in an advanced, developed economy' (1969, p.248). In Drucker's view, this meant knowledge had to be managed effectively. Later, in *The New Realities*, Drucker was clear about what he thought this meant for intellectual activity:

Academia defines knowledge as what gets printed. But surely this is not knowledge, it is raw data. Knowledge is information that changes something or somebody – either by becoming grounds for

action or by making an individual (or an institution) capable of different or more effective action. (1990, 242)

Henceforth, anyone working in the knowledge economy who attempts to serve the interests of their discipline, or indeed to interests of the life of the mind, is to be described as 'a problem'. They are, says Drucker, 'just polishing stones or collecting footnotes' since they fail to relate their work 'to the needs of the whole' (Drucker, 1989, 120). By "whole", Drucker does not, of course, mean expansive universal knowledge. He means the strategic objectives of the higher education institution. The intellectual activities of academics ought to be turned to knowledge exchange and research impact. Once Drucker's management by objectives is applied to the student experience, the inevitable result is the setting of achievable, measurable learning outcomes. As one of us has previously observed, 'universities have become a mechanism for the normalisation of managerialism in the minds of students and staff alike... whatever the subject studied, the individual imbibes the basic *expectation* of being managed by objectives so that they can serve [corporate culture]' (Norman, in Lea, p.79). This is, at best, surreptitious programming. At worst, it is indoctrination.

Problematically, the value of effectiveness does not just displace the value of truth. It also displaces any ethical values. Drucker was explicit in his denunciations of business ethics. In *Management: Tasks, Responsibilities, Practices*, he declared, 'Such things as the employment of call girls to entertain customers are not matters of ethics but matters of aesthetics' (Drucker, 2011, p.295). If this is anything to go by, the architecture of the knowledge economy deserves to be challenged. The system cannot be left uncontested, and the manager cannot be allowed to limit the realm of rationality to 'the realm of fact, the realm of means, the realm of measurable effectiveness' (MacIntyre, p.30). Indeed, recalling MacIntyre, the present Druckerian way of doing things, which has apparently forgotten the meaning of virtue, needs to be made morally accountable.

Management by objectives has also affected research approved to be undertaken in universities. University managers, following the lead of funding bodies, have increasingly encouraged and supported outcome-led investigations. Applicants for funding are often required to predict the results and also the impact of their research. This means, of course, that researchers are asked to anticipate the conclusions of a research project before any research has been undertaken. In doing so, they are forced into only asking questions which they think will receive tidy answers. And yet the UK Government is now beginning to acknowledge that this sets constraints on researchers that can actually hinder science. According to one recent Government paper,

R&D, and in particular transformational R&D, is an inherently dynamic, uncertain, and unpredictable endeavour. Research programmes can perform better when they possess the means to quickly capitalise on new discoveries.

This inherent uncertainty does not naturally suit the system of government budgeting, controls, and project clearance processes, which standardly apply to all programmes (R&D and otherwise). Government generally requires budgets for its large capital projects and programmes to be clearly

specified, objectives to be rigidly set, and economic impacts forecasted and calculated, all well in advance.

While such processes are often prudent and sometimes essential, for some transformational R&D projects, they may constitute a bureaucratic burden which is not sufficiently outweighed by the value or assurance they aim to provide.¹

Perhaps this indicates a turning of the tide (at least for particular types of scientific and engineering research). It also returns us to the inherent “openness” of intellectual activity undertaken in universities, i.e., the ‘dynamic, uncertain, and unpredictable’ quality of serious research activity. As Rowan Williams has observed, research (and teaching) is an often untidy process in which involves ‘sketching a territory, testing a hypothesis, finding that their questions were not the right ones, listening to other people’s questions, listening again to their own first questions, exploring, revising, and correcting’. (2012).

5. Questions with a longer reach

However, we have gone further through this essay in making the case for the virtue of taking an approach that encourages and facilitates a longer reach. Earlier in this essay, we referred to Newman's view that the teaching vocation began in England with three learned monks of St Augustine’s Abbey in Canterbury. Move on across the centuries, and you will still today find teaching and learning undertaken in the same place, in the Anglican Higher Education Institution that now inhabits the old abbey ruins. In 2012, the Archbishop of Canterbury, Rowan Williams, gave the inaugural CUAC lecture in celebration of 50 years of Canterbury Christ Church University². Williams naturally drew attention to those aspects of the work of the university, which illustrated its Anglican identity, giving ‘its chaplaincy provision, and its theological teaching’ as examples. Williams also outlined his vision of the ideal university and, broadly in the spirit of Newman, defended an updated model of liberal education, academic freedom, and the unpredictability of the life of the mind. Universities emerged as places where a variety of kinds of intelligence came to together: intelligences about different subject disciplines, as well as intelligences which reflected a variety of different skills and attributes, brought together in conversation and interaction. Significantly, Williams sought to root this vision in a Christian theology of intellectual life in the *imago Dei*.

From the very beginnings of Christian theology, it was taken for granted that intelligence was a crucial and decisive element in the divine image in human beings. It was, in fact, if you look at some of the early writers of the Christian Church, one of those capacities which put human beings

¹ <https://www.gov.uk/government/publications/advanced-research-and-invention-agency-aria-statement-of-policy-intent/advanced-research-and-invention-agency-aria-policy-statement> Accessed 29/07/2021

² <http://rowanwilliams.archbishopofcanterbury.org/articles.php/2634/archbishop-delivers-inaugural-cuac-lecture.html>

in a unique category. The very fact that intelligence is not just about solving problems, the very fact that intelligence can go beyond what is immediately around, the immediate set of stimuli, and ask deeper questions and questions with a longer reach – that was seen as part of the way in which human intelligence mirrored the freedom of God's intelligence. (Williams, 2012)

Williams developed his theme by applying metaphors of learning and teaching to God:

God is unconstrained by the agenda before him; God does not have to answer the examination paper and nothing else. And because human intelligence runs off in unexpected directions and is not limited simply by what's in front of it, human intelligence has that quality of a kind of freedom. That's one very significant strand in what the Christian tradition brings to the understanding of intellectual activity. Whatever is going on in this mysterious, exploratory area of human activity is part of the reflection of divine liberty in the finite, in the human context. (Ibid)

We suggest that Williams' theological account of intelligence provides another route to thinking about critical thought as an open, non-dogmatic endeavour into the unknown. Unlike Russell's refusal to ask the big question or Drucker's attempt to manage the types of question and answer pursued in the knowledge economy, Williams' view of academic work is genuinely liberating and also genuinely scientific. A university open to the question of God may be the university which allows for the most critical and most expansive types of intelligence.

6. Conclusion: The Metaphysics of Education and Wonder

From theological and philosophical perspective, there are at least two ways in which education is of metaphysical significance. On one level, education transforms the very being of a child. It does this through the acquisition of transcendental capacities for language and reason. Through education – perhaps specifically primary education – the child becomes a critical, thinking being. The child's world is capable of becoming a rational, intelligible world. As Ryan McInerney has recently and memorably argued, education provides a means of 'waking being to thinking' (2021). On another level, that transformation is possible because of the openness of reason to transcendence – to possible worlds different to that of immediate experience, to alternatives to what is here and now and the status quo. This implies the existence of transcendental objectives in education (interestingly, McInerney describes the structure of educational ideals in terms of 'transcendental origins and impossible aims'). For the theologian, of course, such transcendental origins are associated with the divine. But it is also the case that theories of the transcendental origins or transcendental objectives of reason have been with us at least since Plato drew a link between the capacity for learning and the immortality of the soul in *Meno*.

Some contemporary re-workings of the principle of sufficient reason have focused on attempts to explain the underlying or structural intelligibility of the universe. Why is it, after all, that we can make sense of the world around us? Does this not itself suggest that there are good reasons for things? Scientific work proceeds on the presupposition that every reasonable question should have a

reasonable answer – even if we do not yet know what it is. This, it needs to be admitted, is a considerable presupposition, but if we did not accept it, the process of learning would soon break down. After all, if we did not think all reasonable questions have reasonable answers, there would not be much point in the process of questioning in the first place. It is, then, axiomatic that the universe is in some sense informed or shaped by intelligibility. How come? For Thomas Nagel, the universe is one intelligible whole, and we are parts of that whole. When we reason, we participate in a wider rational order which in some sense exists independently of ourselves. If, for McInerney, education is the means of ‘waking being to thinking’, for Nagel, ‘Each of our lives is a part of the lengthy process of the universe gradually waking up and becoming aware of itself’ (p.127). Nagel (an avowed atheist) takes us back to the tradition of thinking there has to be more to rational consciousness than meets the eye.

Theology, of course, also presupposes the intelligibility of the universe. The truths of revealed religion are believed, ultimately, to be reasonable. As Pope John Paul II observed in *Fides et Ratio*, ‘human reason is neither annulled nor debased in assenting to the contents of faith, which are in any case attained by way of free and informed choice’ (para. 43). The *Catechism* teaches that intelligibility is something imparted by the God who is Truth:

God’s truth is his wisdom, which commands the whole created order and governs the world. God, who alone “made heaven and earth” (Ps 115:15), can alone impart true knowledge of every created thing in relation to himself (para. 216).

In principle, Christian theology is not fideistic; it is neither irrational nor anti-rational. Traditional faith holds that God is the infinite aim of learning, the transcendent source of the desire for knowledge. For Thomas Aquinas, ‘Wonder is a kind of desire in knowing. It is a cause of delight because it carries with it the hope of discovery’ (S. Th. 1-2, q. 41, art. 4, ad 5). Where does this learning end? Thomas is clear that wonder does have an end: ‘as it stated in the beginning of the *Metaphysics* (1.2)... a person... wonders... and from wondering proceeds to inquire. Nor does this inquiry cease until one arrives at a knowledge of the essence of the cause’ (S. Th. 1-2, q. 3, art 8). But in the case of God, says Thomas, this inquiry is never-ending, this wonder is never-ending because God’s mystery is infinite. God is a transcendental magnet drawing our minds upwards, the infinitely wonderful source of wonder that remains marvellous in mystery (Thomas Aquinas, *Commentary on the Psalms*, 8, p.167). God, therefore, is the open question that does not receive closure, the principle that allows for the mind’s freedom to ask questions to infinity.

Theists and atheists of note have made the case for the pursuit of the transcendent and the value of wonder. There should be space for wonder in the curricula of universities, and the systems or organising and measuring education should be required to protect these spaces

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